

**PLEASE AMEND THE APPLICATION AS FOLLOWS:**

**I. IN THE SPECIFICATION**

On page 29, line 5, after the word "Xonotlite" remove the second period "." .

On page 29, line 9, change "of1" to -of 1--.

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The S.E.M. pictures at 10,000 times and 2000 times magnification are given in FIG. 2 and 3, respectively.

The high magnification S.E.M. clearly shows the fibrous structure of Foshagite and a small fraction of "rod" or

5 "ribbon" like, tubular structures of Xonotlite. [-] The diameter of the Foshagite "fibers" ranges from 0.1 to 0.2 microns while the length ranges from 1 to 5 microns. The Xonotlite particles had diameters in the range of 0.1 to 0.3 microns and a length in the range [eff1] of 1 to 3

10 microns.

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On page 27, delete Table 1a and substitute new Table 1a as follows:

--Table 1a: Process conditions of 5XPC 12

B<sup>2</sup>

Batch #	Mol Ratio (CaO/SiO <sub>2</sub> )	Concentration (lb/gallon)	Temperature (°C)	Average Pressure (psi)	Reaction Time (hours)
5XPC 12	1.35	0.425	245	456	2.0

On page 27, delete Table 1b and substitute new Table 1b as follows:

-- Table 1b: Pigment Properties of 5XPC 12

Batch #	GE Brightness (% reflectance)	Water Absorption (%)	Air Permeability Blaine Wt. (g)	Air Permeability Blaine time (sec.)
5XPC 12	96.4	880	0.35	81.8

B<sup>3</sup>

On page 28, delete Table 1c and substitute new Table 1c as follows:

--Table 1c: X-ray diffraction peak summary for 5XPC 12

Common Name	Crystallochemical Formula	d-spacing (Major)	d-spacing (median)	d-spacing (Minor)
Foshagite (Phase I)	$\text{CaO}_4(\text{SiO}_3)_3(\text{OH})_2$ (Major)	d=2.97Å	d=2.31Å	d=5.05Å
Xonotlite (Phase II)	$\text{Ca}_6\text{Si}_6\text{O}_{17}(\text{OH})_2$ (Minor)	d=3.107Å	d=1.75Å	d=3.66Å

On page 32, delete Table 1d and substitute new Table 1d as follows:

--Table 1d: Optical property performance of handsheets containing 20% (interpolated) 5XPC 12 and pulp only.

B<sup>5</sup>

Pigment	Brightness (ISO)	Opacity (ISO)	Sheet Scattering Coefficient (cm <sup>2</sup> /g)	Filler Scattering Coefficient (cm <sup>2</sup> /g)
5XPC 12	90.56	90.88	835.21	3077.24
Pulp Only	85.73	73.19	274.8	NM
Improvement over pulp	+ 5.6%	+ 24.2%	+ 203.9%	-

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On page 34, delete Table 2a and substitute new Table 2a as follows:

--Table 2a: Process conditions of 5XPC 27

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Batch #	Mol Ratio (CaO/SiO <sub>2</sub> )	Concentration (lb/gallon)	Temperature (°C)	Average Pressure (psi)	Reaction Time (hours)
5XPC 27	0.85	0.75	190	163.5	2.5

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On page 36, delete Table 2b and substitute new Table 2b as follows:

--Table 2b: Pigment Properties of 5XPC 27

B<sup>7</sup>

Batch #	G.E. Brightness (% reflectance)	Water Absorption (%)	Air Permeability Blaine Wt. (g)	Air Permeability Blaine time (sec.)
5XPC 27	91.2	360	0.5	17.0

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On page 37, delete Table 2c and substitute new Table 2c as follows:

--Table 2c: X-ray diffraction peak summary for 5XPC 27

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Common Name	Crystallochemical Formula	d-spacing (Major)	d-spacing (Median)	d-spacing (Minor)
Riversideite (Phase I)	$\text{Ca}_5\text{Si}_6\text{O}_{16}(\text{OH})_2$ (Major)	d=3.055Å	d=3.58Å	d=2.80Å
Xonotlite (Phase II)	$\text{Ca}_6\text{Si}_6\text{O}_{17}(\text{OH})_2$ (Minor)	d=3.056Å	d=4.09Å	d=2.50Å

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On page 40, delete Table 2f and substitute new Table 2f as follows:

--Table 2f: Optical property performance of handsheets containing 20% (interpolated) 5XPC 27 and 20% (interpolated) PCC.

B<sup>9</sup>

Pigment	Brightness (ISO)	Opacity (ISO)	Sheet Scattering Coefficient (cm <sup>2</sup> /g)	Filler Scattering Coefficient (cm <sup>2</sup> /g)
5XPC 27	87.86	83.35	449.12	1092.42
PCC	90.21	89.39	738.55	2546.03
Improvement over PCC	- 2.6%	- 6.76%	- 39.19%	- 57.09%

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On page 49, delete Table 5b and substitute new Table 5b as follows:

--Table 5b: Pigment properties for Examples 9, 10 and 11.

B<sup>10</sup>

Example #	Water Absorption (%)	Brightness (ISO)	Blaine Wt. (grams)	Blaine Time (sec.)	PH
Example 9	480	92.9	0.5	74	11.1
Example 10	520	96.1	0.45	108.5	11.0
Example 11	600	93.3	0.4	135.0	11.2

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On page 54, delete Table 7a and substitute new Table 7a as follows:

--Table 7a: Reaction conditions for Examples 16 and 17.

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Batch #	Mol Ratio (CaO/SiO <sub>2</sub> )	Conc. (lb/gallon)	Temp. (°C)	Average Pressure (psi)	Reaction Time (hours)
5XPC 52	1.31	.25	245	490	2
5XPC 55	1.31	.4	232	387	2

On page 55, delete Table 8a and substitute new Table 8a as follows:

--Table 8a: Reaction conditions for Examples 18.

B<sup>12</sup>

Batch #	Mol Ratio (CaO/SiO <sub>2</sub> )	Concentration (lb/gallon)	Temperature (°C)	Average Pressure (psi)	Reaction Time (hours)
5XPC 57	1.31	0.5	245	375	2

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On page 55, delete Table 8b and substitute new Table 8b as follows:

--Table 8b: Pigment Properties Examples 18.

B<sup>13</sup>

Batch #	GE Brightness (% reflectance)	Water Absorption (%)	Air Permeability Blaine Wt. (g)	Air Permeability Blaine time (sec.)
5XPC 57	97.0	680	0.35	57.5

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On page 57, delete Table 9a and substitute new Table 9a as follows:

--Table 9a: Optical property performance of handsheets containing 20% (interpolated) TiSil and 20% (interpolated) PCC.

B<sup>14</sup>

Pigment	Brightness (ISO)	Opacity (ISO)	Sheet Scattering Coefficient (cm <sup>2</sup> /g)	Filler Scattering Coefficient (cm <sup>2</sup> /g)
TiSil	87.2	92.3	858.0	3065.1
PCC	90.0	89.0	716.8	2507.0

On page 58, delete Table 10a and substitute new Table 10a as follows:

--Table 10a: Optical property performance of handsheets containing 20% (interpolated) TiSil and 20% (interpolated) PCC + TiO<sub>2</sub> combination.

B<sup>13</sup>

Pigment	Brightness (ISO)	Opacity (ISO)	Sheet Scattering Coefficient (cm <sup>2</sup> /g)	Filler Scattering Coefficient (cm <sup>2</sup> /g)
TiSil	87.2	92.3	858.0	3065.1
PCC with TiO <sub>2</sub>	90.0	89.0	716.8	2507.0

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On page 60 , delete Table 11a and substitute new Table 11a  
as follows:

--Table 11a: Reaction conditions for Example 21.

B<sup>14</sup>

Example #	Batch #	Mol Ratio (CaO/SiO <sub>2</sub> )	Concentration (lb/gallon)	Temperature (°C)	Reaction Time (hours)
Example 21	XPC 65	1.67	0.71	232	2

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On page 60, delete Table 11b and substitute new Table 11b  
as follows:

--Table 11b: Pigment properties for Example 21.

B<sup>17</sup>

Example #	Water Absorption (%)	Brightness (ISO)	Blaine Wt. (grams)	Blaine Time (sec.)	PH
Example 21	420	93.7	0.45	46.2	10.7

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On page 62, delete Table 12a and substitute new Table 12a  
as follows:

--Table 12a: Reaction conditions for Example 22.

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Example #	Batch #	Mol Ratio (CaO/SiO <sub>2</sub> )	Concentration (lb/gallon)	Temperature (°C)	Reaction Time (hours)
Example 22	XPC 117	1.67	0.67	224	2

On page 62, delete Table 12b and substitute new Table 12b  
as follows:

--Table 12b: Pigment properties for Example 22.

B<sup>19</sup>

Example #	Water Absorption (%)	Brightness (ISO)	Blaine Wt. (grams)	Blaine Time (sec.)	pH
Example 22	470	95.3	0.45	184.7	10.6

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On page 63, delete Table 12c and substitute new Table 12c  
as follows:

--Table 12c: Optical property performance of handsheets  
containing 6% (interpolated) TiSil, HuberSil, and Huber  
Carbonate.

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Pigment	Normalized Opacity (ISO)	Ink Penetration	Show Through	Print Through
TiSil	86.29	1.46	4.67	6.13
HuberSil	85.33	1.60	5.14	6.74
Huber Carbonate	86.75	2.46	4.79	7.24

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On page 64, delete Table 12d and substitute new Table 12d  
as follows:

--Table 12d: Strength property performance of handsheets  
containing 6% (interpolated) TiSil, HuberSil, and Huber  
Carbonate.

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Pigment	Porosity (sec/100c c air)	Tensile Index (Nm/g)	Stiffness (Gurley Units)	Static Coeff. of Friction	Sheet Smoothness (Sheffield Units)
TiSil	15.40	25.57	22.08	0.90	159.76
HuberSil	11.93	21.95	24.31	0.90	176.02
Huber Carbonate	11.36	25.32	18.06	0.86	164.06